BULLETIN No. 11

THE RAILWAY AND LOCOMOTIVE
HISTORICAL SOCIETY

THE RAILWAY AND LOCOMOTIVE HISTORICAL SOCIETY

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The Railway & Locomotive Historical Society.

On April 17th last, the New York Central Railroad celebrated the 100th anniversary of the granting of the charter of the old Mohawk & Hudson R. R., now a part of that wonderful railroad system. On October 7th, 1826, the old Quincy Railway, the first in America, was opened. It is hoped that this anniversary will not pass unnoticed. Under the supervision of Mr. Edward Hungerford, the Baltimore & Ohio R. R. is making plans for an elaborate celebration in 1828. Others will doubtless follow as our American rialroads reach their centenary mark. In these anniversaries we should not lose sight of the fact that the granting of the charter is the birth of the railroad, but the date of actual operation, the day the road was opened for traffic, determines the priority of the road as compared with others. As these anniversaries occur it is a welcome fact to note the interest displayed in them of the present operating companies and it is hoped that additional information can be procured to cover facts that were hitherto obscure.

The account of Mr. George Althouse, contributed in this number by Mr. Inglis Stuart, covers the life of a man who saw the tiny single drive wheel locomotive evolve to the present modern day power unit. To have met and known Mr. Althouse would have been more than a pleasure. His fund and store of information and experiences would be well worth the reading. Our early locomotive enginemen are rapidly passing. They were true veterans of our early locomotives and had experiences which no doubt will never again occur. All the more they should be reproduced.

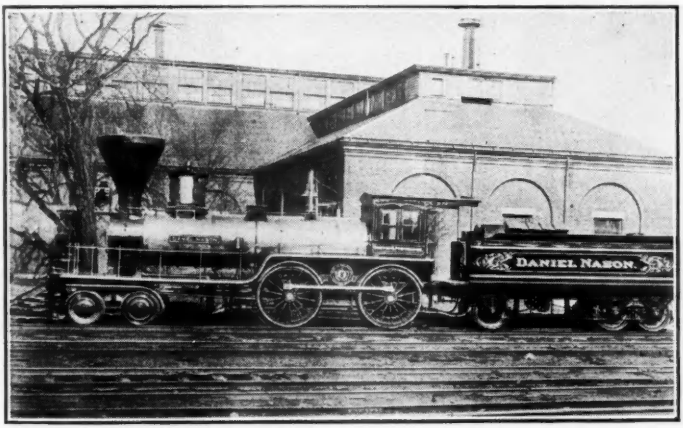
Mr. Lucas in his contribution on "Locomotive Builders at Paterson" has given us an insight to the many builders of that city. It is unfortunate that the records of many of these early builders have been destroyed. This problem continually confronts us and our members should loose no time in acquainting themselves with the possibilities of procuring any of these old records where they exist. The Society, with the cooperation of Harvard University, offers now a safe place to keep valuable records or books. Our articles on locomotive builders in this country is far from complete. A glance at that list of locomotive builders of 1856 will show that. Your committee will be interested in any contribution that you can make.

In the leaflet forwarded to every member of this Society this winter, your attention was invited to the fact that your Directors had voted to accept the invitation of the authorities of Harvard University and will have a room in the new library now building on the Charles River. It is the intention of Harvard University to have the best collection of material relating to "Business" in connection with its School of Business Administration. This will cover "Business" in the broadest sense of the term. Already a group of the most influential men of Boston have organized a Society and on September 26th, 1925, there was chartered in the State of Massachusetts, "The Business Historical Society." It is of interest to quote part of the "agreement" of this Society: "To educate and benefit its members and mankind, and to advance the scientific study and development of finance, trade, commerce, industry and business generally, by research and instruction, by preparing, collecting, preserving and diffusing scientific, literary and historcal materials and knowledge relating to business affairs * * *." The room offered by the authorities of Harvard University will provide this Society with a "Home." Here will be a place for our meetings. Here can be deposited such material as you wish, no matter how valuable it will be safe. Title to ownership will rest with yourself or the Society, just as you prefer, but it will be taken care of. Our members will be welcome to visit this room, and Mr. Eaton, Librarian of the Harvard School of Business Administration, will be glad to assist you in any way that he can. Remember, that this is Your Society and this room will be for Your Benefit! Don't expect the "other fellow" to do it all.

Locomotives at Purdue University.

About twenty years ago, Mr. W. F. M. Goss, Dean of the Engineering Department of Purdue University, Lafayette, Indiana, undertook the task of collecting historical locomotives and other railway appliances. Hearty cooperation on the part of various railroad officials rewarded his efforts and in several years he succeeded in obtaining as loans, deposits or gifts a very interesting and instructive collection of railway relics.

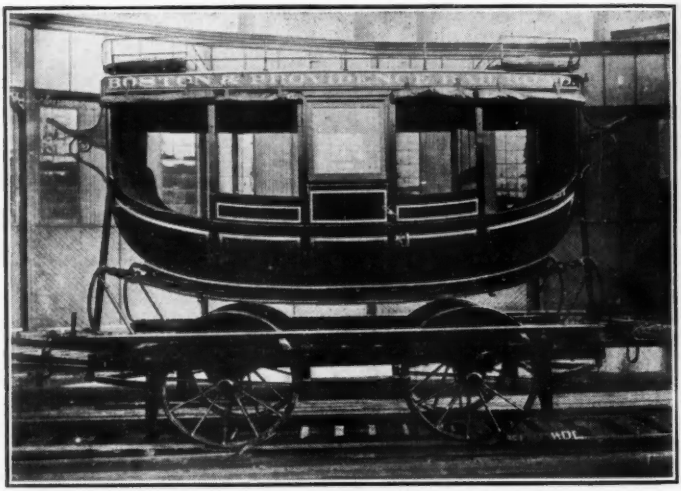
Two of these came from the New York, New Haven & Hartford R. R., through the courtesy of Mr. Higgins, former General Manager. I have selected the "Daniel Nason" and the old Boston & Providence coach of 1833 to appear in this issue.



THE "DANIEL NASON."

The "Daniel Nason" was deposited at Purdue University in January, 1905. It was part of the equipment of the old Boston & Providence R. R., which through the Old Colony was acquired by the present New Haven System. It represents a type of locomotive built by Mr. G. S. Griggs, Master Mechanic, in

1858, that did wonderful service on that road. There is one other locomotive like the "Daniel Nason" in existence, I am told, the other being in the collection of the Baltimore & Ohio. We need not dwell here with what Mr. Griggs did to improve the locomotive. The old "Daniel Nason" is still preserved with the name, "Danial Nason" emblazoned on the tender in gilt and shaded letters, surrounded by a scrollwork design of curly-cues painted in all bright hues of the rainbow, with its large stack used in wood burning days, brightly colored hexagonal wooden sand box and bell mounted between the two bronze safety valves. It makes a very striking appearance of early days and all it needs is a billow of smoke to come belching from the stack to make one believe the "Daniel Nason" is ready for service.



THE BOSTON & PROVIDENCE COACH OF 1833.

Another item in the collection is the old Boston & Providence R. R. coach of 1833. This coach is mounted on four wheels, almost as large as wagon wheels, has flat leather springs and was first drawn by horses. The seats are upholstered in dark blue and there was room for eight passengers inside and probably as many more on the roof, including the brakeman. Brakes

were applied by foot levers. This coach and the "Daniel Nason" were part of the exhibit shown by the Old Colony R. R. at the World's Fair, Chicago, in 1898.

In our Bulletin No. 10 we reproduced a photograph of the "Tom Thumb," built by Peter Cooper for the Baltimore & Ohio R. R., in 1830 as the first locomotive built in America. Perhaps it would have been better to have described this locomotive as the first built in America to run on an American railway. It was not the intention to slight the engine built by Col. Stevens in 1825. Col. Stevens, as many of us know, advoated the building of a railway in place of the Erie Canal. As early as 1818 he advocated the building of a railway from Philadelphia to Pitts-

THE "TOM THUMB."

burgh. The reproduction shown herewith is the small engine built by Col. Stevens in 1825 that was run on a circular track at Hoboken, N. J., and undoubtedly the first locomotive built in America, but which never saw service on an American or any other public railway. The interesting feature of this engine is, however, "that the boiler was composed of small tubes filled with water."

On April 17th, 1926, President Crowley of the New York Central Railroad together with three hundred officials and guests of the road unveiled two bronze tablets, one at the Albany Union Station, the other at the Schenectady Station, commemorating the one hundredth anniversary of the granting of the charter of the old Mohawk & Hudson R. R. This road, seventeen miles in length, was the first unit of what now makes up the present New York Central System. An interesting exhibit was staged of ten power units, chief of which was the old "DeWitt Clinton" and train of yellow and black coaches with people appropriately costumed and the famous No. 999 of the New York Central Railroad.

Our First Two Bulletins.

For the benefit of our members and those interested in the Society, a limited number of bulletins have been printed containing the material that appeared in our first two bulletins. As long as the supply lasts we will furnish this bulletin separately or those who wish to buy a complete set of the ten previous bulletins may now have this opportunity. It would be well for our members to check their sets carefully for now is a good opportunity to procure any of our previous issues. Sets of our first ten bulletins will be furnished for $10.00. Our No. 10 Bulletin contains an index of articles that appeared in the first ten bulletins. Price of the reprint of Bulletin 1-2 will be furnished upon application to the Editor.

An interesting communication has been received from Mr. Charles L. Howard, 400 North Michigan Ave., Chicago, Ill., part of which reads as follows:

> "I am collecting historical data in reference to American railroads and am, therefore, writing to find out whether or not any members of the Society will be good enough to let me have information in reference to the actual origin of locomotive and car devices or anything pertaining to railroads. As example, for in-

stance, I would appreciate being informed on what locomotive the cow catcher and other devices were first used, etc."

Mr. Howard has raised a very interesting query. With the help of our members perhaps a list of these devices could be made showing the road and locomotive, together with the device. Such a list would be extremely valuable, let alone interesting, and our members are urged to give Mr. Howard such assistance as they can. Don't forget the date as well, as this is important.

"First Railroad into Washington and its Three Depots," by Washington Topham, 43 "You" St. N. W., Washington, D. C. This interesting history of the first railroad to enter Washington, ninety years ago, and description of the three depots during this period, should be of interest to our members. The work is of 73 pages, attractively illustrated and copies will be furnished by Mr. Topham upon receipt of price of $1.00 per copy.

The Central Steel Co., Massillon, Ohio, has recently issued an interesting work entitled "Development of the Locomotive." This is a collection of the advertisements used by this company during the past year depicting the growth and development of the locomotive. It is extremely well published and very interesting and much credit is due the Central Steel Co. for attempting a work of this sort. Copies of this book can be procured from the Central Steel Co., Massillon, Ohio.

The New York and Erie R. R. Co. have for sale on favorable terms, the following schedule of rolling stock of the gauge of 4'-10". All can be delivered immediately. It can be seen at Paterson and is the entire stock of the Union R. R., Paterson and Ramapo and Paterson and Hudson River railroads. Reasonable credit will be given on the above on satisfactory security.

CHAS. MINOT, *Supt.*

	Kind of Cars			Builders.	Condition
2	Passenger	8	wheel	Cummings & James, J. City.	Good
2	"	8	"	Wm. Cummings, Jersey City.	Good but wants painting.
2	"	—	"	Tracey & Fales, Hartford.	Very good.
4	"	8	"	Springfield Car & Engine Co.	Good but 3 need paint.
2	"	8	"	A. T. Pearce, Norwich.	Good.
2	"	—	"	Eaton & Gilbert, Troy	Want repairs.
1	"	—	"	N. Y. & E. R. R. Co.	Good, new.
1	Baggage	8	"	" "	Good.
6	"	8	"	Unknown	Want small repairs.
1	"	6	"	N. Y. & E. R. R. Co.	Want small repairs.
8	Box Freight	8	"	"	Good.
18	" "	4	"	Unknown	Want small repairs.
16	Platform	8	"	N. Y. & E. R. R. Co.	Good.
9	"	4	"	Unknown	Want considerable repairs.
1	"	6	"	"	Want considerable repairs.
2	"	8	"	"	Want considerable repairs.

Name of Engines	Builders	Cyl.	Wheel	Condition
R. L. COLT	New Jersey Loco. Co.	16 "x20"	5′	Good
UNION	Rogers, Ketcham & Grosvenor, pass. outside	15 "x20"	6′	Good
NEW YORK	Rogers, Ketcham & Grosvenor, lt. pass. inside	14½"x18"	6′	Good
RAMAPO	Rogers, Ketcham & Grosvenor, lt. pass. inside	14½"x18"	6′	Wants paint a small repairs
PASSAIC	Rogers, Ketcham & Grosvenor	14½"x22"	5½′	Wants paint a small repairs
PATERSON	Rogers, Ketcham & Grosvenor	12 "x22"	5′	Wants paint a small repairs
WHISTLER	Made in Baltimore	11 "x16"	5′	Wants much r pairs
McNEIL	Made in Liverpool	9½"x16"	4′	In bad order

This advertisement appeared in the American Railroad Journal, Jan. 21, 1854.

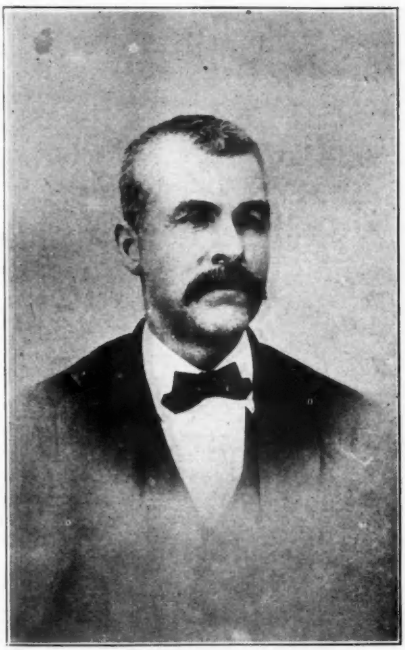
W. A. Lucas.

The "McNeil" was built by George Stephenson in 1833. She was a 4-2-0 with driving axle behind the fire box and was the basis of Rogers early designs.

George Althouse.

By Inglis Stuart.

On the 9th of June, 1921, George Althouse was laid to rest in the beautiful Fishkill Rural Cemetery and now, it is fitting to pause for a review of his career as a locomotive engineer. His observation of railroad development began in boyhood while the iron steed of the early period was to be seen in service



Mr. George Althouse. Taken about 1861.

and, close at hand, he watched the evolution of the enormous locomotive which to-day is the feature of the American Railroad. He was thoroughly familiar with the little single driver which still was working when he began railroading and in suc-

cession ran all the types which appeared prior to 1885 when he withdrew from railroad work.

He was born at Millerton, N. Y., July 10, 1832, and was of American stock. Jacob Althouse, his father, was also a New Yorker, having been born at Red Hook near Poughkeepsie. The paternal line was of Quaker persuasion. At Danbury, Conn., Jacob Althouse married Eliza Ann Slater. Her family was from Rhode Island and her grandfather was a soldier in the Revolutionary War. About 1834 the family moved to the vicinity of Salisbury, Conn., where in due time George attended school and acquired a good education.

Like most boys he had a lively interest in railroad operations and remembered the arrival of the first train of the Housatonic road when the rails reached Falls Village. The locomotive was named "Pequannock" and was a single driver weighing about eleven tons. Successively he saw the advent of the furniture of the Housatonic and gave the order as follows:

Pequannock, Baldwin, single driver, outside connection
Bridgeport, Baldwin, single driver, outside connection
Albany, Rogers, four drivers, outside back axle conn.
Stockbridge, Rogers, single driver with trail wheel, o. c.
New York, Rogers, single driver with trail wheel, o. c.
Berkshire, Rogers, four drivers—Like Alb. but heavier
Massachusetts, Rogers, 4-4-0 type 18 tons
Connecticut, Rogers, 4-4-0 type 19 tons
Fairfield, Rogers, 4-4-0 type 20 tons
Litchfield, Rogers, 4-4-0 type 20 tons
Housatonic, Rogers, 4-4-0 type 20 tons
Reindeer, Rogers, 4-4-0 type 22 tons
Pittsfield, Amoskeag, 4-4-0 type 24 tons
Taghonic, Amoskeag, 4-4-0 type 24 tons

The Taghonic was sold to the Hudson & Berkshire R. R. and renamed "Henry Waterman." Except as stated above, all were inside connected and equipped with V. Hook and were wood-burners. This roster is down to 1852 when he ceased to be on the Housatonic. He related that an artist living at New Milford painted a picture of each locomotive with accuracy and gave the paintings to the respective engineers. How interesting it would be if those paintings could be found! Alas! the name of the artist is lost and presumably the paintings have been discarded by the descendants of these engineers.

In 1848 at the age of sixteen and school days ended, he started with the Lawrence Company, Norfolk, Conn. The con-

cern was controlled by a Mr. Battell whose name is perpetuated in Battell Chapel at Yale. Charcoal pig iron was manufactured and his task was to stand by the trip hammer. Owing to the proximity of the furnace, he suffered from the fumes of the gas and was obliged to give in his time and go on a farm. This speedily removed the effects of the gas and he went to Fishkill Plains, N. Y., where he was employed in the grist mill of Mr. Stringham. This ancient mill had come by inheritance to Stringham from his grandfather, Col. Richard Van Wyck. It was at the foot of a small millpond and is in operation still, meeting the needs of the countryside.

In 1849 Mr. Althouse was offered the position of brakeman on the Housatonic, but very soon became a fireman on the "Berkshire." This was used in freight service for, although a four wheel engine, it was classed as heavy. His runs were not confined to the Housatonic road as there was an arrangement then in force under which some of the Housatonic freights ran through from Bridgeport to New York over the New York and New Haven rails. Thus as early as 1849 he had the opportunity of observing all the locomotives on the New Haven and the Harlem. The Shop of the Harlem then was at 32nd Street where the Park Avenue Hotel stands and the Round House was across the street.

He prowled through the Shop and noted a number of the little locomotives which had run on the Harlem in its earliest years, but which now were rusting in ordinary, awaiting demolition. He enumerated among these the "Yorkville," "Harlem" and "Westchester." The "Minerva," which belonged in the set, still was serviceable, and was out on the line in light work. Through the neglect of the engineer the water ran down and its boiler was ruined in the explosion which ensued.

He became acquainted with the Harlem's engineers and mentioned Andrew Cosgriff, (who was appointed Master Mechanic after Morris Miller); Edwin R. Briggs (who was senior engineer of the Harlem and usually referred to as "Old Briggs"); Hatch (who was running the "Mahopac" when it exploded at White Plains); Charles J. McMaster (who became Superintendent of Motive Power of the Rutland Railroad); John Coddington (who came to the road in 1842 and presided over the Round House); Franklin Fowler, John Hallenbeek, and others. On the New Haven he mentioned John Allen (who

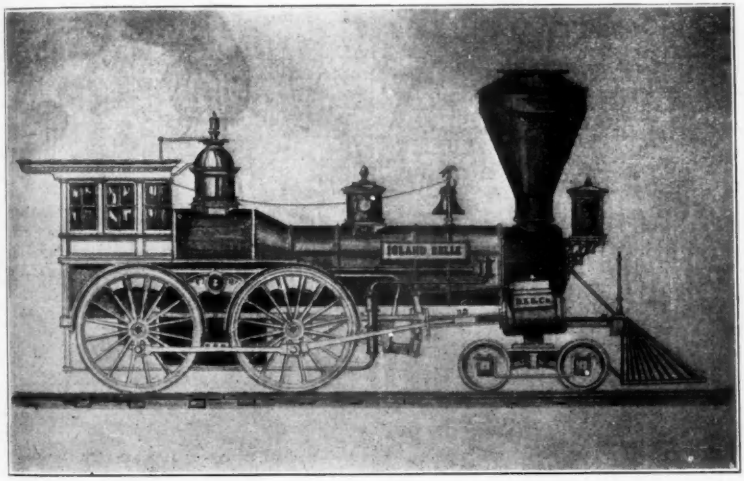
ran the first engine—a very small locomotive from the Rogers Works). The New Haven started without names. Its first set of locomotives proved insufficient for the business of the line and this "No. 1" of Allen's was replaced within a year by a larger engine also built by Rogers and taking the same number. He knew George C. Stevens (who had a long career on the New Haven) and Henry Kettendorf who graduated into the position of Master Mechanic of the road.

After his promotion in 1851 to the right hand side of the cab Mr. Althouse went to the Naugatuck where he ran the "Jericho" named after a bridge near Waterbury. From the Naugatuck he went to the Harlem where he remained several years. Practically he had running on every engine of the road during this interval, and, of course, knew them well. He thought highly of the "George L. Schuyler," a Danforth engine, but it was easy to perceive that the beautiful and speedy "Island Belle" a Breese and Kneeland engine, charmed him. What became of the "Belle" was not known to Mr. Althouse. She was changed to coal burning, and, as badged "23," was on the Harlem Extension in 1868. She was the first locomotive that the noted Dennis Cassin was given to run during the period when he was on the Harlem Extension R. R. and was a contrast to the Empire State Express engine which he whirled along so famously at a later stage of his career.

The Harlem at this time was an independent line and competed with the Hudson River R. R. for Albany and Western traffic. The passenger locomotives were built for speed and traversed the distance between the two cities—150 miles—in three hours and a half, drawing an average train. That is better speed than attained by the trains to-day. The drivers of these Harlem racers were "tall." The "Troy" and "New York" had six foot wheels and the "Atlantic" and "Pacific" six and a half foot wheels and weighed 28 tons. They stopped twice for wood and water between Chatham Four Corners and 32nd Street. In recalling Mr. Althouse's reminiscences of the Harlem it is notable that he never related making speed runs himself, but his allusions were to the schedule of these competing trains, some of which, without doubt, were on his assignment. Nor did he figure in collisions. Once in a while a locomotive ment with derangement of its machinery and he commented on the conditions of such an event, as contrasted with

the present day. The breakdown might occur in a locality remote from assistance and the engineer would be left to his own devices in remedying the trouble. Perhaps a connecting rod snapped. He would get out his tools, take off the parts, load them on the tender, and then the maimed locomotive would limp on its journey. It was his recognized knowledge of mechanics, his fertility of resource in meeting difficulties, and his care in running that made him a favorite of the superintendents of all the roads on which he was employed.

His service on the Harlem brought him acquaintance with the Hudson River Railroad's corps of engineers in the 50's for he often visited the round house at 33rd street and 10th avenue;



THE "ISLAND BELLE."

and he knew familiarly Walter Dawson (who became Master Mechanic of the Delaware, Lackawana & Western R. R.) and his brother H. H. Dawson—"Harry" Dawson—the author of "Reminiscences of a Locomotive Engineer"; James G. Paul, Sr.; Henry Milligan; William Buchanan, and others. But his intimacy was of longest standing with that veteran of the Hudson River, Charles Bridgman Robinson.

Mr. Althouse had many friends in Paterson in the various machine shops and often strolled through the Danforth and Rogers establishments. He was on speaking terms with Charles

Danforth and John Cooke and knew William C. Hudson, who was the mechanical genius of the Works after Thomas Rogers died. He saw the latter several times and mentioned him with far more respect than he did in speaking of Jacob S. Rogers. The latter had financial ability and guided the Works with success but his arrogant nature made him unpopular with the operatives.

Leaving the Harlem in 1857 Mr. Althouse went to the Erie, where he was given a Wilmarth engine. This had no name but was badged "No. 166." It was a wood-burner then and had the large stack, but the accompanying photograph shows it as altered to a coal burner. He considered it a fine engine and was greatly pleased when the photograph was shown to him, as he recalled the locality in the Ramapo Valley. A framed copy of this photograph is in the rooms of the Bureau of Railway Economics, Washington, D. C.

In 1858 he was induced to go on the Illinois Central. His home was at Amboy, in the Northern part of the State, and he ran usually on the Northern Division which was supervised by Mr. Noyes as Assistant Master Mechanic. He had come to the Illinois Central from the Fairbanks Works and Mr. Althouse held him in high regard. Samuel J. Hayes, from the Baltimore and Ohio, was General Master Mechanic. The equipment was to a great extent Rogers. Only two carried names and these were "Cairo," on the Southern Division, and "Rogers" on the Northern.

He noted the engines on the adjoining railroads. He liked those of the Galena and Chicago Union best and instanced a very beautiful locomotive of that road named "Como." This was one of the few built by the Chicago Locomotive Company during its brief existence. The Burlington had dropped names for the most part and likewise the Rock Island. A few on the Toledo, Wabash and Western carried names. What is now the Alton was insolvent and, he had the impression, did not name the engines but designated them by road numbers. In the days when the company was operating under the title of Chicago & Mississippi R. R. there are some reasons for assuming that it named its locomotives and that in the equipment were several very old ones which were of types antedating the building of the Alton & Sangamon R. R., which the Chicago and Mississippi succeeded in 1854. Unfortunately the motive power records

prior to 1871 were destroyed in the Chicago Fire and data prior thereto is not accessible.

Mr. Althouse's train used to cross the line of the Peoria and Oquawka Eastern Extension R. R. at El Paso. He used to see the "W. H. Gruger" and its engineer at this crossing. Now that engineer in 1859 and 1860 was James C. Nash, and it is a singular fact that as an apprentice in 1854 he helped in the construction of this locomotive at White River Junction, Vt. He became an engineer and went to Illinois. In 1859 he was directed to go to Peoria and take the "Cruger." He was greatly surprised to find it was the very one which he had built. A marked character about the machine caught Mr. Althouse's attention and he always greeted the engineer as his train rolled over the crossing. Many years passed and then in 1916, through an allusion in a letter of Mr. Clark's written to a friend of Mr. Althouse, the latter recalled the crossings of 1859 and sent a message to Mr. Clark, and the two exchanged photographs and kept up communication till Mr. Clark's death in January 1920.

In the interchange of reminiscences between Messrs. Althouse and Clark among other topics occurred mention of a singular locomotive belonging in 1859 to the Burlington; it then carried the name "Pigeon" and was well remembered by Mr. Althouse. It had been constructed in 1837 by Baldwin upon the order of the State of Michigan and ran on the State's railroad then called Central Michigan R. R. The engine carried the name "Ann Arbor" and was a single driver. Its engineer was Charles F. Jauriet, a Frenchman of decided mechanical ability who became one of the prominent Master Machinists of the West.

When the Chicago and Aurora Branch took the present name of Chicago, Burlington and Quincy R. R., Mr. Jauriet was called as Master Mechanic. He brought with him the "Ann Arbor" which meanwhile had become the "Pigeon" when in 1846 the State sold the Central R. R. to the Michigan Central R. R. Co., Mr. Jauriet remodelled the "Pigeon" and made it a pile driver. Mr. Clark's letter on this point was as follows:—

> "The construction of the 'Pigeon' was somewhat dif-
> "ferent from the 'Pioneer' as the one set of drivers
> "were located in front of the Fire Box and had a trail-
> "ing pair of thirty inch car wheels behind.

"Now the change to Pile Driver was this. A Bev-
"el Gear was put on the axle and a shaft with a Bevel
"Gear on the end which worked in the Gear on the axle.
"Then the shaft went to the front end of the engine un-
"der the Smoke Box connected to a Drum on which the
"rope went around and connected with the Iron Ham-
"mer. A large spring was set at either end of the
"springs on the Boxes of the trailing wheels and three
"inch square thread ran through the deck of the engine
"with a nut bolted to the deck. The bottom end of the
"screw rested on the Spring Board, the top end pro-
"jected through the deck squared for a Wrench. Now
"when to be used as a Pile Driver they screwed down
"on the screw thus raising the Drivers clear of the
"rails, then blocked the trailing wheels so the Engine
"could not move. Now you see the Engine was in con-
"dition to drive Piles. This Engine would haul all ma-
"terial used for Pile Driving. In other respects she
"was like the 'Pioneer.'"

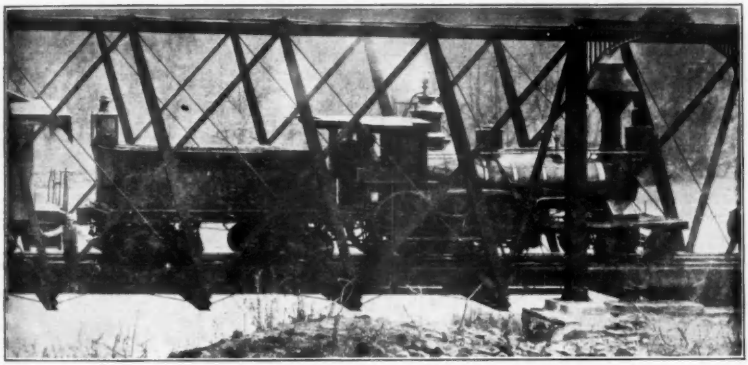
The "Pioneer," to which Mr. Clark alluded, was the historic engine which came to Chicago to open the Galena Union in 1848, and was built by Baldwin in 1836.

Mr. Althouse often spoke of the emulation which existed among the engineers of the Illinois Central R. R. in the management of their locomotives. Each tried his best to get the utmost number of miles from the fuel, oil and waste furnished and to keep down repairs. Every month a great sheet was posted in the Round Houses where all could read it giving the performance of each locomotive and its engineer and the posting of these monthly statements aroused keen attention. He regarded these Illinois Central Engineers as constituting a very fine type of man. The locomotives were standardized, i. e., they presented little difference in outward appearance not bearing names but merely distinguished by road numbers, did not readily recall themselves. The one which he remembered best was "No. 97." He recalled it as a reliable machine but of course, it did not present the individuality held by the "Schuyler" or "Island Belle" thus showing how greatly that feature is increased by cognomen and how it is diminished by numerical designation. If the Pilgrims had come to Plymouth Rock on

"No. 838," instead of the "Mayflower," the vessel would be recalled by very few. However, names for locomotives were called for by a period of men, conditions and methods which long ago passed and never can return.

Mr. Althouse came into Illinois while political activity was intense. He was a Republican, having cast his first vote for the Fremont and Dayton ticket, and took great interest in the joint debates of Douglas and Lincoln. He attended one of these at Freeport and in 1860 cast his vote for the Lincoln and Hamlin electors.

He was assigned to a run which terminated at Galena and in the evening, to while away the time, often visited a large store where many citizens of the town were wont to congregate



New York & Erie No. 166.

for sociability. Here he occasionally exchanged greetings with Ulysses S. Grant. Grant at this period dressed coarsely and looked rough as he wore a flannel shirt and tucked his trousers into cowhide boots. Indeed Mr. Althouse hardly would have remembered him if it had not been that within a year or two Grant became exceedingly prominent. Had it not been for this burst into prominence there is little doubt that the recollection of these casual meetings would not have revived and Grant would have passed out of Mr. Althouse's memory together with many similar figures in the motley throng of that Galena store.

George B. McClellan and Ambrose E. Burnside, Superintendent and Assistant Superintendent, also came under his ob-

servation and he remarked that he little dreamed these three individuals were destined to occupy the exalted positions in history which the Civil War brought to each.

During the War he was assigned on several occasions to locomotives drawing troop trains. At the close of hostilities he tried the New Orleans and Jackson and the Mississippi Central Roads. Conditions were distasteful there and he went out on the Union Pacific, then under construction. The lawlessness of the Plains impressed him unfavorably and he came back to Illinois where he stayed several years.

1869 found him on the Central of New Jersey. His fine qualities soon caught the attention of Superintendent R. E. Ricker. Perhaps the particular incident which won Mr. Ricker's appreciation was this. A locomotive had come from the Grant Works and proved "cranky." So much difficulty was experienced that the engineers, one after another, declined to have anything to do with the machine.

Mr. Althouse asked leave to study its peculiarities, and finally located the trouble. Thereafter it was perfectly tractable and Mr. Ricker, who had debated whether or not to dispose of it, was delighted when Mr. Althouse drew an excursion train of seventeen cars to Plainfield and return on schedule time. He let Mr. Althouse have the little "Flemington"—the last of the wood-burners. He could depend on this fine Baldwin which had the run to Somerville as a local, for it came quickly to full speed between stations. He considered this engine one of the easiest locomotives to manage that had fallen to his lot and it was, with the possible exception of the "Island Belle" the one which gave him the greatest satisfaction to recall. While he was aware, of course, that the day of wood-burners had closed, nevertheless he maintained that they were far pleasanter to manage than coalers.

From the Central he went to the Rondout and Oswego and thence to the Rhinebeck and Connecticut, running from the Hudson to Hartford. This road had a large but unremunerative traffic and went into insolvency and has lost its identity, being merely a local branch line.

Mr. Althouse in 1885 retired from locomotive engineering and thereafter lived at Groveville. He filled the position of Engineer in the Matteawan Manufacturing Company for a long time but finally withdrew as infirmity of age came on, and took

his leisure. He was a man of thoughtful mind, modest and unassuming. It was a pleasure to converse with him for he expressed his ideas clearly and logically in well-chosen phraseology and never rambled. Nor did he relate coarse anecdotes or use profane language. His retentive memory and active mentality endured to the last and when he laid down the daily newspaper and opened conversation with a companion his talk was sure to be interesting, whether it bore on social topics or on railroad affairs. He had come to view the world objectively, as was natural in the case of one whose life work had drawn to a close, and his conclusions could be regarded as impartial.

Another characteristic was the memory which he held of locomotives—not merely a memory of the ones which he managed during his thirty-six years of engineering, but of the very large number which came under his observation. He seemed to carry a distinct picture of these locomotives, and in speaking of one of them would gaze at this mental picture. He usually would state the make, then, whether or not it was a wood-burner; then, whether inside connected; whether the name was panelled on the boiler or on the cab. Regarding the make, he very seldom failed to recall it correctly—indeed but one instance occurred where memory in this respect proved treacherous, and that oddly enough was in the case of the first locomotive which he ever saw—the "Pequannock." He declared it was a Rogers, while in reality it was built by Baldwin in 1839. Possibly some bystander erroneously pronounced it a Rogers and this first impression quite likely remained paramount whenever he happened to think of the "Pequannock" after a long lapse of years. We know how very tenacious childhood impressions are and that even if erroneous, they are the first that come in mind. It was not a mistake that he would make in his independent judgment of a locomotive. His offhand statement of the make of an engine which he had seen, perhaps casually, years before, was time and again confirmed by reference to the official roster of the Master Mechanic. He had a real love for a locomotive and regarded it as a "breathing being almost."

Mr. Althouse was a true representative of the type of Engineer which characterized the Middle Period of our locomotive engines. He took a deep interest in his work and performed it as intelligently and conscientiously as if the locomotive were his own property. He did not spend much thought on the

question whether or not the pay was what his services were worth. He had no need for thought of this kind since Superintendents always gave him the highest rate for they recognized his ability. It is doubtful that he ever took part in any strike.

Locomotive Builders of Paterson.

By W. A. Lucas.

One of the most prominent industrial centers in this country where locomotives have been built is Paterson, New Jersey.

The history of locomotive building in Paterson is, to a considerable extent, a history of the city itself—for three-quarters of a century. The cheap and reliable water power afforded by the Falls of the Passaic River was the attraction which first drew manufacturers there in the early part of the nineteenth century.

A firm known as Paul and Beggs was actually the first concern in Paterson to attempt the construction of a locomotive. About the time it was completed, however, their shop burnt down and their tools and the locomotive were destroyed in the fire. This ended their career in the newly formed industry.

The following is a list of the four Paterson firms, under their various incorporated names, which were employed in building locomotives, of which only one plant, the Cooks Works of the American Locomotive Company, is in operation at the present time. These are grouped in the order of their establishment:

Rogers

Rogers, Ketchum and Grosvenor	1832 to 1856
Rogers Locomotive and Machine Works	1856 to 1893
Rogers Locomotive Company	1893 to 1901
Rogers Locomotive Works	1901 to 1904
Rogers Works of the Amer. Loco. Co.	1904 to 1914

Grant

Swinburne, Smith & Company	1848 to 1851
New Jersey Locomotive and Machine Co.	1851 to 1863
Grant Locomotive Works	1863 to 1883

Swinburne

William Swinburne	1851 to 1857

Cooke

Danforth, Cooke & Company	1825 to 1865
Danforth Locomotive & Machine Company	1865 to 1882
Cooke Locomotive & Machine Company	1882 to 1901
Cooke Works of the Amer. Loco. Co.	1901 to date

ROGERS WORKS.

This firm was organized in 1832 as Rogers, Ketchum & Grosvenor, builders of spinning machinery. They also furnished iron work for bridges, wheels, axles, etc., to the few railroads then in existence. Beginning in 1837 with the locomotive "Sandusky," these works grew steadily in importance and held the leadership in the locomotive industry for many years.

Thomas Rogers, the founder, died in 1856, which resulted in the firm being reorganized under the name of the Rogers Locomotive & Machine Works. In 1893 it was reorganized as the Rogers Locomotive Company, and again in 1901 as the Rogers Locomotive Works. In 1904 the property was sold to the American Locomotive Company, and in 1914 the plant was permanently abandoned as far as locomotive building was concerned.

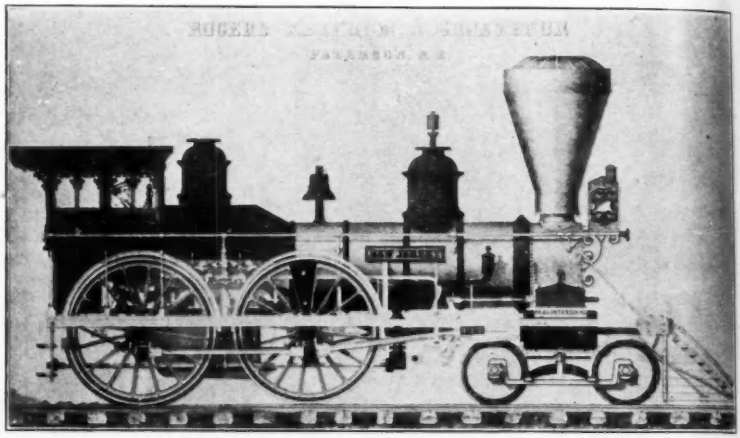
The first Rogers engine, "Sandusky," followed British design, except in the use of a leading truck. In fact, this engine was patterned after the "McNeil," built by George Stephenson for the Paterson & Hudson River R. R., and put in service in 1834.

Among Rogers earliest improvements were counterbalanced driving wheels, hollow spoked cast iron wheel centers, outside connections to the cylinders, and link valve motion. Boiler design and construction claimed their earnest attention, and this feature was to a large degree responsible for the fine reputation of Rogers engines. Wagon top boilers were first built in 1850.

Rogers locomotives went to the four quarters of the globe, as well as the railroads of the United States, and Paterson was well represented.

It was an unfortunate circumstance that caused the city fathers in the latter part of the past century to assess and tax land owned by Jacob Rogers, son of the founder and president

of the company, as city lots instead of farm land, which it was at that time. This action greatly incensed Mr. Rogers and was in a large measure responsible for the sale of the plant to the American Locomotive Company in 1904.

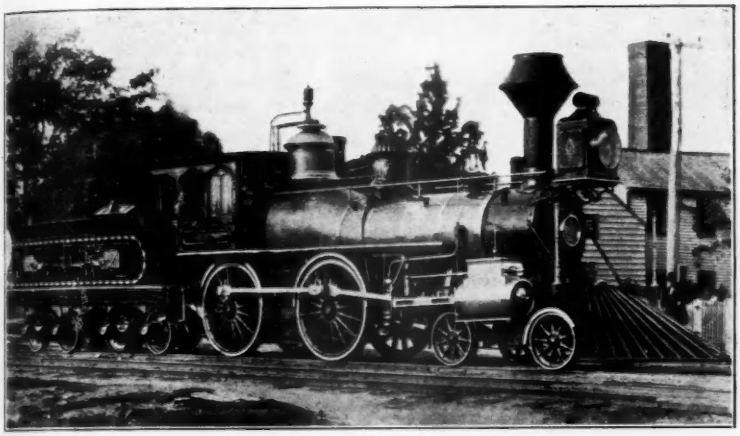


ROGERS, KETCHUM & GROSVENOR, ABOUT 1855.

Due to the unfavorable location of the plant, remote from a railroad, the American Locomotive Company in 1914 found it advisable to finally close the works. Most of the machinery was moved to the enlarged shops of the Cooke Works.

All locomotives constructed at Rogers had to be hauled through the city streets to the Erie tracks, approximately a mile distant. In the early days, this was accomplished by laying short sections of track upon which the engine was then hauled to the railroad by horses. At a later date, when street car tracks were available, a large capacity flat car was built which could carry the heaviest locomotive. A few years ago, it was a common sight to see a small boxed-in dummy engine pulling this flat car with a large Pacific or Consolidation type engine aboard through the streets from the works to the Erie freight yards. The raw material for the locomotives had to be transported to the plant in the same manner. This system of transportation caused a lot of confusion and constituted a large item of expense and finally resulted in the closing of the works.

The capacity of the plant increased from year to year and at the time it was sold to the American Locomotive Company nearly 6300 locomotives had been built.



NEW JERSEY MIDLAND R. R. No. 73. ROGERS LOCO. & MACH. WORKS

The first five engines constructed were as follows:

"Sandusky"—built for the Mad River & Erie R. R.—1837.

"Arresseoh"—built for the N. J. R. R. & Trans. Co.—1838 (Feb.)

"Clinton"—built for the Lockport & Niagara Falls R. R.—1838 (Apr.)

"Experiment"—built for the South Carolina R. R.—1838 (June)

"Batavia"—built for the Tonawanda R. R.—1838 (Oct.)

It was nine years before the first one hundred engines were built. The

500th was completed in 1854
1000th was completed in 1861
2000th was completed in 1872
3000th was completed in 1883
4000th was completed in 1888
5000th was completed in 1894
6000th was completed in 1903
6200th was completed in 1904

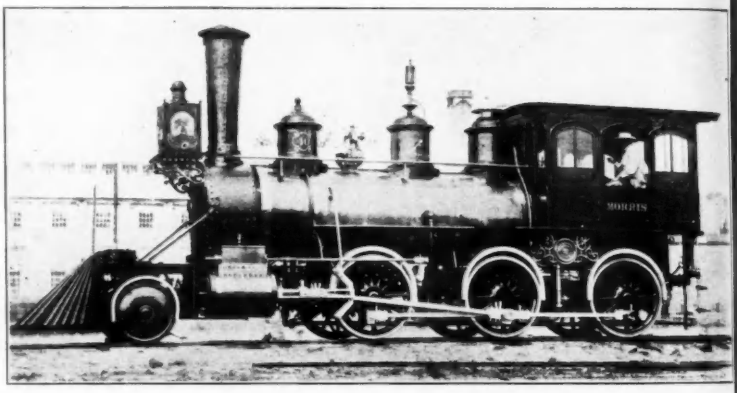
In 1904 the construction numbers were changed to the American Locomotive Company's series.

GRANT WORKS.

The second locomotive building establishment in Paterson was Swinburne, Smith & Company, who began constructing locomotives in 1848. The company had been in existence some years previous as a general machine shop, but on the completion of the Erie Railroad they definitely entered the locomotive field.

The firm was composed of Mr. Swinburne, formerly superintendent of the Rogers Works, Mr. Smith, a moulder, and several financial backers. Due to expansion, the company incorporated in 1851 as the New Jersey Locomotive & Machine Company, a change which Mr. Swinburne did not approve of. He withdrew from the partnership and started a plant of his own.

In 1863, Mr. D. B. Grant, a New York broker, secured control of the New Jersey Locomotive & Machine Company, changing the name to the Grant Locomotive Works. The company prospered for twenty years until 1883 when, due to high finance



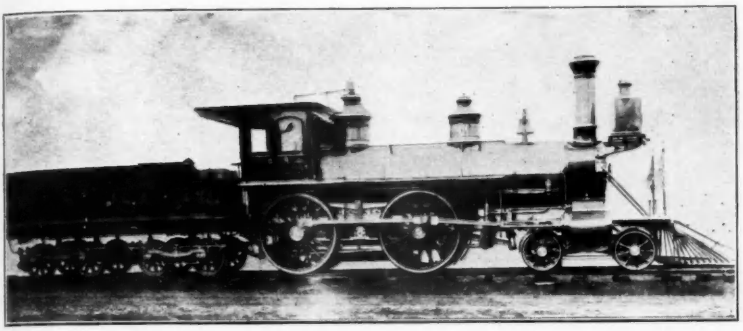
Morris & Essex R. R. No. 40. N. J. L & M. Co. 1863.

ing and other causes, the works were removed to Chicago. The Chicago plant, however, was never opened, the Grants abandoning the entire project.

The first engines built were for the Erie Railroad and were constructed in 1848.

The Grant Works were noted for standardization of parts, all parts on an order for engines being made to jigs and templates.

In 1867, they built an engine for the Chicago, Rock Island & Pacific Railroad which was named the "America" and exhibited at the Paris Exposition. This engine was awarded the Grand Prix, a gold medal, which was given to the builders. On the cabs of all engines built after that time they placed a replica of this medal in brass, both obverse and reverse sides.



THE "AMERICA," BUILT BY GRANT LOCO. WORKS 1867.

The Grant engines were built chiefly for broad gauge roads and their product was therefore of heavier construction than the average built at that time. The New York & Erie, Ohio & Mississippi, Canandaigua & Elmira, Delaware, Lackawanna & Western, Erie & North East, and the Buffalo & New York City R. R., all six foot gauge roads, had locomotives built by this plant.

More than 1800 locomotives were built at these works. The

100th engine was built in 1854
500th engine was built in 1865
1000th engine was built in 1871
1800th engine was built in 1883

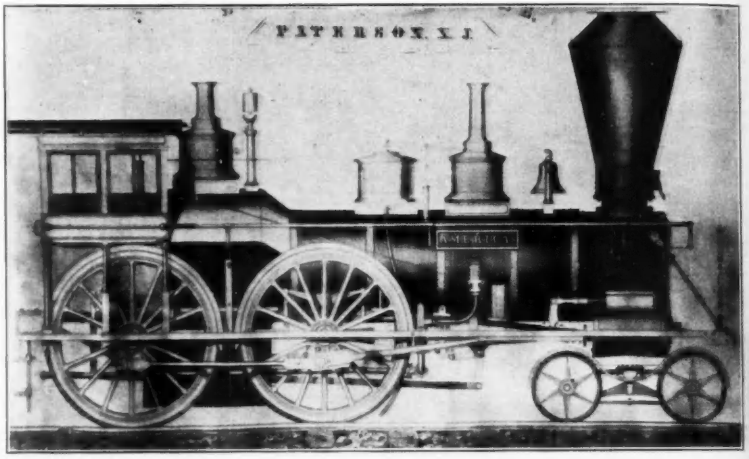
SWINBURNE WORKS.

Mr. William Swinburne, former partner in the New Jersey Locomotive & Machine Company, was the third builder of locomotives to establish a shop in Paterson.

In 1851, he constructed a building close to the Erie tracks, which is still standing. This was the first plant to use steam power for operating machinery. The other locomotive plants

were located near the Passaic Falls, which provided all their power by race ways.

The business prospered until the sudden business panic of 1857, when Mr. Swinburne was forced into bankruptcy.



BUFFALO & CORNING R. R. "AMERICA." WM. SWINBURNE, 1852.

The total number of engines constructed from 1852 to 1857 was 104. The Ohio & Mississippi, Marietta, and St. Louis, Alton and Chicago Railroads were among several to which Mr. Swinburne furnished motive power. About half of the engines built by these works were for the Erie Railroad.

Although Mr. Swinburne did not introduce any radical improvements, his engines were among the best constructed, as testified to the writer by Mr. Thomas Houston, late of Paterson, who worked when a young man on the engine "America," built by Mr. Swinburne in 1852. Mr. Houston was a messenger for Swinburne and was later connected with the Grant Works, for which firm he travelled to many countries erecting their engines.

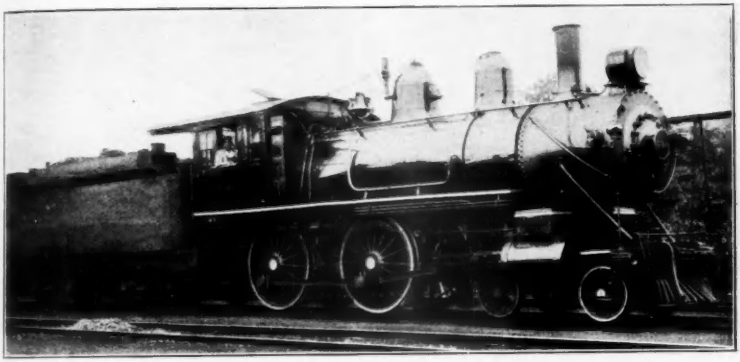
COOKE WORKS.

The last to start and only surviving shop building locomotives in Paterson had its origin in the firm of Charles Danforth & Company, which incorporated in 1852 under the name of Dan-

forth, Cooke & Company, builders of locomotives and cotton machinery.

In 1865 it was again reorganized under the name Danforth Locomotive & Machine Company, which name was retained until the death of Mr. Cooke in 1882, at which time the firm named was changed to the Cooke Locomotive & Machine Company. In 1901 the plant was sold to the American Locomotive Company.

From 1852 to 1889 the shop was located near the falls, at Congress and Jersey Streets. In 1889 a large tract of land was



Erie No. 499. Cooke Loco. & Mach. Co. 1893. Formerly the Erie Engineers Exposition Engine "C. B. Thomas".

secured in the southern section of the city adjoining the Erie Railroad tracks, on which site the present plant was erected.

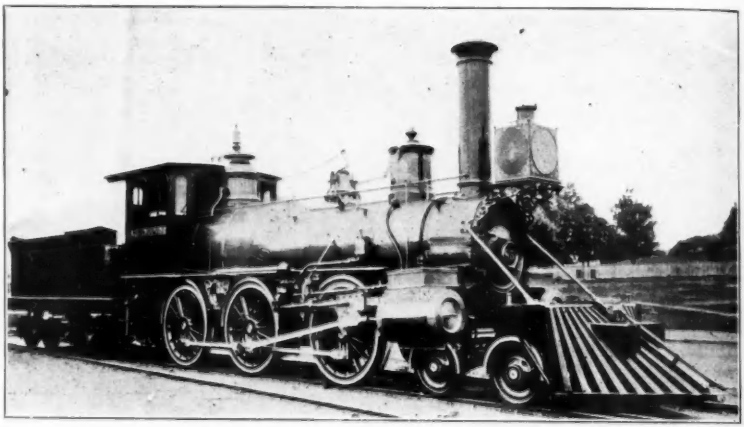
Mr. John Cooke was superintendent of the Rogers Works previous to his joining the Danforth firm. His wife was the daughter of Wm. Swinburne, so that locomotive building was bred in the family.

The first engine completed was the "Vincennes," for the Ohio & Mississippi Railroad and was built in 1852. This engine, however, was one of an order for five which were not delivered due to financial conditions which developed on the railroad. The first engine actually delivered was, by a singular coincidence, named "Sandusky," built in 1853 for the Junction Railroad. (The first Rogers engine was also named "Sandusky," built for the Mad River and Erie in 1837.)

The first successful hard coal burning engine was built by

these works in 1854 for the Delaware, Lackawanna & Western Railroad. It was named "Anthracite" and was the forerunner of many Cooke engines on the D. L. & W.

The Elliott rotary snow plow was first constructed here in 1885. This is the type of plow used so successfully on our western roads in combating snow banks.



D. L. & W. "A. Lincoln." Danforth, Cooke & Co., 1863.

Approximately 2600 locomotives were constructed by this plant from 1852 to 1901, at which time the American locomotive Company bought the plant. The

100th locomotive was constructed in 1857
500th locomotive was constructed in 1869
1000th locomotive was constructed in 1880
2000th locomotive was constructed in 1890
2600th locomotive was constructed in 1901

Since 1901, when the American Locomotive Company took over the works, as many more engines have been built.

Their products are now confined mainly to snow plows, contractors' locomotives, and engines for export to foreign railroads. Many weird, though handsomely finished, engines are turned out for foreign roads.

Several additions have been made to the plant, and it bids fair to keep the locomotive industry alive in a city where many famous engines were built.

The Jarrett and Palmer Special.

By D. L. Joslyn.

In this day and age of speed, the swift overland trains, the speeding automobile, the aeroplane, especially the latter, we are prone to overlook the fact that the old time railroaders were not so slow themselves. For be it known to those that do not know, that in June 1876 a train made the run from New York to San Francisco in 84 hours, a distance of over 3313 miles, averaging over 40 miles per hour including all stops. Remember that in those days they did not have the heavy rails, the well ballasted track, the efficient automatic couplers and spring buffers and the up to date air brakes of to-day.

The couplers were either straight link and pin or the more up to date Miller hook. The brakes were mostly hand operated and in case of air brakes they were straight air and not all Engineers were familiar with the application of it. The line was nearly all single track with switches to pass other trains and the means for fueling and watering a train were not as up to date as we know them.

Be that as it may the run was made in 1876 and the following are high lights of the famous run as nearly as can be ascertained at this late day, being gleaned from old newspapers and from old employes who either had a hand in operating the famous train or watched it go by.

The Jarrett and Palmer Special was arranged and managed by Henry C. Jarrett of Jarrett and Palmer, Managers of Booth Theatre, New York.

Lawrence Barrett the famous actor, Patrick Thorne and C. B. Bishop were scheduled to appear in Shakespeare's play "Henry V" at McCullough's California theatre in San Francisco, on Monday, June 5th, 1876.

Whether the idea of making a special fast run originated with Mr. Barrett or with Jarrett is not known, but in view of the fact that Messrs. Barrett, Thorne and Bishop used the train, gives credence to the belief that the idea originated in connection with their journey to San Francisco. As the fastest regu-

lar passenger train schedule of that date called for seven days, the proposition to operate a through train on a schedule of three and one-half days, undoubtedly appealed to the famous actor.

The railroads were interviewed and readily arranged a schedule of 84 hours New York to San Francisco.

The New York Herald and the Post Office Department also indorsed the idea, and newspapers and mail were dispatched to San Francisco, the Pacific Coast and intermediate points on the train.

The fare, New York to San Francisco and return, going on the Jarrett and Palmer special, including a week at the Palace Hotel in San Francisco, and returning on any regular train within six months, was five hundred dollars. The tickets were especially prepared and were of exquisite workmanship in book form, five inches by four inches. The outer cover was of solid silver, burnished in the center. Inside the cover were ten leaves constituting the ticket and its various coupons. These coupons were all printed from engraved plates. Each book ticket was enclosed in a white satin casket with lilac satin lining. The cost of each ticket book and case was, I am told, forty dollars.

The train when it left New York consisted of a Pullman Hotel Car named "Marlborough," one combination passenger and smoking car and one baggage car, but for some reason the baggage car and combination passenger and smoker were dropped and a combination baggage and smoker substituted.

The train left New York City at 12:40 A. M. Eastern time June 1st, over the Pennsylvania R. R. and the first stop was at Pittsburgh at 10.58 A. M. Some run, I should say. A distance of 439.5 miles, covered by one locomotive and without a single stop. We can not beat that record to-day. An average speed of 43.5 miles per hour was maintained on this road.

The train left Pittsburgh over the Pittsburgh, Fort Wayne and Chicago R. R. at 11:05 A. M. Eastern time, seven minutes after the train's arrival.

The run to Chicago was made in 11 hours and 7 minutes, a distance of 468 miles, an average speed of 42.1 miles per hour being maintained, arriving at Chicago at 10:19 P. M. Eastern time. Four stops were made to change locomotives and 21 other operating stops were made.

The train remained at Chicago for thirty-one minutes, leaving at 10:30 P. M. Central time, over the Chicago and North

Western R. R., arriving at Council Bluffs at 10:00 A. M. Central time June 2nd. Four stops to change locomotives and five operating stops were made on the C. & N. W. The fastest time made on the C. and N. W. was 62 miles per hour, with an average of 42 miles per hour.

From Council Bluffs to Ogden the train sped over the tracks of the Union Pacific R. R. leaving transfer grounds at Omaha at 10:43 A. M. Central time, June 2nd. Now began the most difficult part of the trip so far. For the train had to climb from an elevation of 966 feet at Omaha to 8242 feet at Sherman, thence down to 6550 feet at Medicine Bow, up again to 7030 feet at Creston, down to 6140 feet at Green River, up again to 7835 feet at Aspen and then down to 4310 feet at Ogden, arriving there at 10:57 A. M. Mountain time June 3rd.

Eight locomotives were used by the Union Pacific, Omaha to Ogden, maintaining an average speed of 41 miles per hour. Maximum speed reached on the U. P. was 72 miles per hour.

Now for the last leg of the journey, the run on the Central Pacific R. R. The Central Pacific was all ready at Ogden and when word was received that there was a washout on the Union Pacific, Mr. Towne, the Supt. of the Central Pacific, gave orders to have a train all ready to run down to the washout and transfer the passengers. This was not necessary, however, as the special got safely over the washout and into Ogden on time.

At Ogden the locomotive C. P. 149, formerly named "Black Fox," a Schenectady build, was waiting for the train and what a train it was. A large 30 ton Pullman Hotel car with 42" diameter wheels, and a small combination baggage and passenger car, the latter having an old style drawhead with link and pin coupling.

Hank Small, C. P. Engineer, coupled his locomotive on, and the train shot out of Ogden at 9:44 A. M. Pacific time. A short distance out of Ogden a hot box developed on the baggage car, and one of the men who was sent along by the C. P. R. R. to take care of such cases, succeeded in breaking the cover of the box while kneeling on the step of the car and holding on with one hand. He succeeded in getting hot box dope and oil into the box, so that it cooled off in a little while.

The train arrived at Kelton at 11:42 P. M. and in coming to a stop broke the air pipe on the Pullman. The hand brakes were still in good condition so the train was handled by elbow grease

the rest of the way, except when crossing the Sierra Nevada Mountains, when coaches were added to give air brake power.

In passing Palisade a box got hot on one of the wheels in the tender truck and Ben Smith, one of the engineers on the locomotive, nursed it until Battle Mountain was reached, when a stop of eighteen minutes was made, the journal cooled off and a new brass was put in.

As the train approached Reno, Mr. Jarrett said he wanted to go through there like a streak of lightning and brought out a lot of Roman candles, prepared a lot of red fire to place on the tender, mustered all hands on the Reno side of the train each holding four Roman candles, and when within a few miles of Reno they were lighted, the red fire set off on the tender, and into Reno went the train, thick flames rolling out of the smoke stack, an immense red fire blazing on the tender and hundreds of balls belching out of the Roman candles. The whole town was up and the train was received with bonfires and the thunder of cannon.

It must have been a strange, wild sight to the assembled crowd to witness the train coming in as if in a blaze of fire in the dead hour of the night, and had it not stopped, it would have required but a little stretch of the imagination to have made out the train as a visitor from Pluto's depths on destruction bent. However the train stopped for a mess of trout for breakfast, which they did not get. So on into the night toward Truckee rolled the train. Truckee was reached at 1:31 A. M., June 4th.

At Truckee, the town was alive with people and everyone had a lantern. A Central Pacific Coach was added so that the air brakes could be used, and a locomotive was coupled on to help up the mountain. Barney Kelly was in the cab of this locomotive. The train left Truckee at 1:56 A. M. and arrived at Summit 7017 feet above sea level at 2:31 A. M. The helper locomotive was cut out and another C. P. Coach added to help with air brake power in descending the Mountain. Gold Run was reached at 4:08 A. M. and the passengers began to bestir themselves, as they desired to see Cape Horn, but the train flew by in the grey haze of the morning so fast that the view they got did not abide with them, and the passengers declared the train was going too fast, that there was no particular hurry, that they did not desire to reach San Francisco before noon,

but on rushed the train, and as it swung around the curves it threw them from their feet. The Conductor himself was braking on the Pullman to hold her steady and keep her back.

Colfax was reached at 4:30, people all along the way waving their hands and shouting "Go It" and the train still going it. Auburn 5:01, Rocklin 5:24, Roseville 5:35 and Sacramento 6:02; 743 miles from Ogden, nineteen hours and twelve minutes out from Ogden.

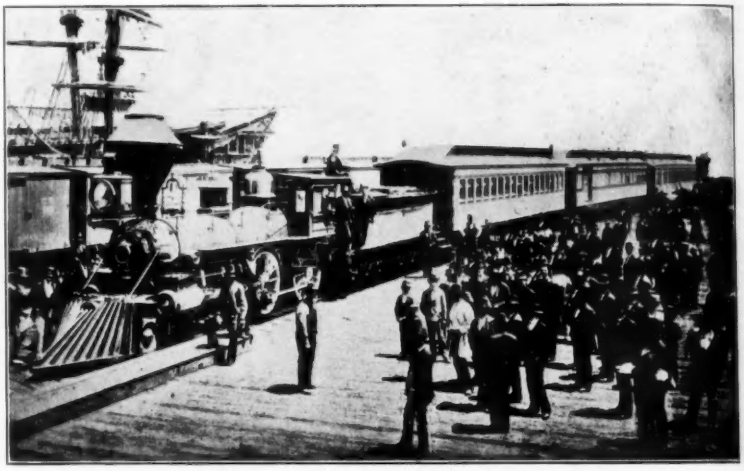
The Station was filled with people and a great shout went up as the train pulled in. In seven minutes the C. P. coaches were cut out, another one added, coal is taken on and away goes the train to Stockton.

C. P. "Black Fox" and crew that manned her on the Jarrett and Palmer Special.

The first stop out from Sacramento was Ellis, where water was taken and a helper was put on to help up to Altamont. Altamont is reached at 8:15 A. M., the helper cut out and away speeds the train. Oakland wharf is reached at 9:31 A. M. Pacific time, the last two miles being run in two minutes. The passengers are transferred to the waiting Ferry and in 14 minutes more or at 9:45 A. M. Pacific time, the Ferry was at San Francisco, just one minute less than 84 hours, from New York and 24 hours one minute from Ogden.

The locomotive 149, hauled the train the entire 879 miles from Ogden, Utah, to Oakland Wharf with the exception of help from Truckee to Summit and from Ellis to Altamont, maintaining an average speed of 41 8-10ths miles per hour.

The C. P. officials had platforms erected along the right of way, where it was thought the train would require fuel and water, and on these platforms were men with bags or baskets of coal on one side, and tubs of water on the other side, so that to coal and water the locomotive was but the work of a few minutes.



THE JARRETT AND PALMER SPECIAL ARRIVING AT OAKLAND WHARF, JUNE 4TH, 1876.

The passengers on the train were, Henry C. Jarrett, the promoter of the trip and Manager of Booth's Theatre, New York; Lawrence Barrett, the Star; C. B. Bishop and Fred A. Thorne, of Booth's Theatre; Milton Prior, of the London Illustrated News; G. F. Williams, of the New York Herald; P. Rewsen, New York; Henri Caril, Paris; Alfred Morrison, New York; Hyatt Morrison, New York; Warren Emerson, Boston; Alfred Monere, New York; E. N. Parker, Chicago; C. A. Weid, Connecticut; T. N. Dougherty, Myer Silverstine and Dr. R. Arndt, New York; F. L. Vandenburg, Supt. of Telegraph, with his instruments, in case of an accident. At Ogden the follow-

ing C. P. officials, officers, and employees boarded the train: R. H. Pratt, Division Supt.; Benj. Smith, Road Foreman of Engines; Geo. Sturtevant, Conductor with two Brakemen; and W. B. Ludlow, in charge of car running gear. On the Locomotive 149, was Hank Small, Engineer; James Wright, Engineer and Firemen Driscoll, Brown and Dean. At Wells, the end of the Salt Lake Division, Mr. Pratt, his Conductor and Brakemen, left the train, and Mr. Codington, Supt. of the Humboldt Division, with conductor James Hopkins and two Brakemen took charge. At Minnemucca, Mr. Codington and his men left the train and Mr. Frank Free, Supt. of the Truckee Division and Hugh Darrah, Conductor and two Brakemen took their place. At Truckee Mr. Free and his men left and Mr. Fillmore, Supt. of the Sacramento Division with Conductor G. F. Colderwood and two Brakemen took charge. At Sacramento, Mr. Fellows, Supt. of the Western Division and Conductor John Fredericks, took charge, also Mr. Benj. Welch, Master Car Builder, boarded the train.

I have no record of what locomotives were used on the various R. R.'s. or who manned them, except on the U. P. R. R. and C. P. R. R.

The following Locomotives were used on the Union Pacific:

Omaha to Grand Island, Locomotive No. 146, built by McQueen, 1869.

Grand Island to North Platt, Locomotive No. 156, built by Hinkley and Williams, 1869.

North Platt to Cheyenne, Locomotive No. 77, built by Rogers, 1868.

Cheyenne to Laramie, Locomotive No. 168, built by Taunton, 1875.

Laramie to Rawlins, Locomotive No. 167, built by Taunton, 1875.

Rawlins to Green River, Locomotive No. 151, built by Taunton, 1875.

Green River to Evanston, Locomotive No. 169, built by Taunton, 1875.

Evanston to Ogden, Locomotive No. 153, built by Taunton, 1875.

The first three of these were 16″x24″ locomotives, weighing 33 tons. The remainder were 18″x24″, weighing 35 tons. All were equipped with drivers 5′8″ diameter. I presume they were all eight wheelers.

The C. P. 149, was an eight wheeler with 16″x24″ cylinders, 5 ft. driving wheels and weighed 37½ tons. She was built by Schenectady and went into service on the C. P. R. R. in September 1868.

The San Francisco Bulletin in commenting on the performance of the Jarrett and Palmer Special, pointed out that in the days of ox teams it had taken a greater number of days to travel from St. Joseph, Mo. to California than it took hours for the special to cross the continent. The Pony Express cut the time down to from twelve to fourteen days, St. Joseph to Sacramento a distance of 1,900 miles nearly all of the way through a trackless wilderness, 75 horses being used each way. It took the lumbering stage coach 28 days to come through. The regular trains made the trip New York to San Francisco in seven days. Now the aeroplane makes it between sun up and sun down.

The picture of the Special arriving at Oakland Wharf, was supplied by Mr. Stanley F. Merritt, and is from the private collection of Mr. W. E. Gardiner. The picture of the C. P. 149 is from my own private collection and the men pictured are the crew that brought the train through.

The Night Express.

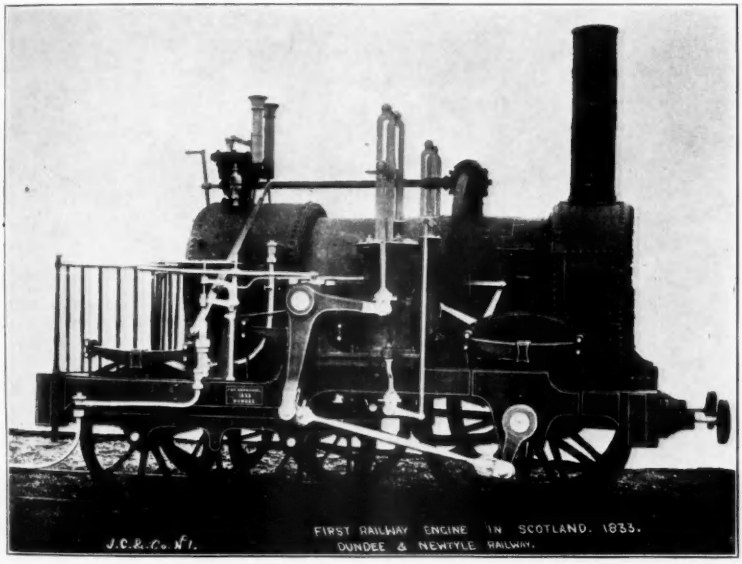
By William Hurd Hillyer.

There is a light at last in the sable mist, and it hangs like a rising star
On the border line 'twixt earth and sky, where the rails run straight and far;
And deeply sounds from hill to hill, in a mighty monotone,
A distant voice—a hoarse, wild note with a savage warning blown.
'Tis the night express, and well 'tis named, for behold! from out the night
It comes and darkly adown the rails it looms to the startled sight—
Larger, nearer, nearer yet—'til at last there's a clang and roar,
A wave of heat, and a gleam of red from a closing furnace door;
Then the crash and shriek of the rushing train—and our hearts beat fast and high
When sudden and swift through the shadowy mist the night express goes by!

The First Locomotive Built in Scotland.

By G. W. Bishop.

The early dawn of railways found a singular echo in Caledonia, for it is recorded that at the Battle of Prestonpans, in 1745, Sir John Cope ran his artillery along a tram-road from Tranent to Cockenzie. Colliery tram-roads were numerous at that period.



It is not with these early tracks that we are concerned at the moment, however, but with a line sanctioned in 1826, and opened in 1831 from Dundee to Newtyle, amid hilly country further inland. It was intended chiefly for the carriage of provisions and goods, imported by sea to Dundee. This Dundee & Newtyle Ry., 10½ miles long, had three inclined planes, one at each end and one in the middle, worked by fixed engines and

ropes. The level portions were worked by horse wagons. Black's Road and Railway Traveling Map of Scotland, date 1843, shows the line from Dundee to Newtyle, and branches from the latter point to Cupar Angus, Meigle, and Glammis.

James Carmichael was born at Glasgow in 1776. In 1810 he set up a foundry at Dundee, with his brother Charles, under the name of "J. & C. Carmichael." The foundry was then known as West Ward Foundry, but latterly as Ward Foundry. The brothers became well known as makers of stationary engines, fan blowing machines, and steamships. The fame of Stephenson's locomotive of 1825 soon reached Dundee, and James Carmichael went to Darlington to see this engine. So impressed was he that the firm arranged to build two locomotives for the D. & N. Ry. The first appeared in Sept. 1833, named "Earl of Airlie." It will be seen that the design was rather curious, including a leading pair of drivers, 4ft. 8in. in diameter, an early example of a trailing bogie, and outside frames and bearings. Cylinders were 11x18, with the firms' pattern of valve gear, having a fixed eccentric for each cylinder. The engine weighed 9½ tons in working order, and cost £700. The tender was a four-wheeled wagon, carrying a water tub, and cost £30.

The trial trip of the "Earl of Airlie" attracted thousands of people. Twenty wagons, each containing 6 tons of coal, were attached, and the engine moved off with ease, amid the cheers of the spectators. But something went wrong and the train came to a stand. A clergyman who was looking on asked what was the matter, and was informed that the "iron horse had broken down." "No other could be expected," replied the old-fashioned parson, "As it is tempting Providence for any man to make an iron horse, to feed it with coals, and to make it draw such an enormous load." However, the cause of the breakdown was quite trivial, and the train soon dashed along faster than before.

A sister engine, "Lord Wharncliffe," was immediately built, and the two engines worked efficiently for 30 years, gaining very good opinions. Unfortunately, they were eventually broken up.

The D. & N. was afterward leased and worked by the Caledonian Railway. I am informed that the original line had a slightly different route to the present day line. The old track

ran under the hill called the "Law" by a tunnel, which is now boarded up. For some distance the old and new lines are parallel.

Charles Carmichael died May 13, 1843, his brother James surviving till Aug. 14, 1853. A statue of the latter was erected at Albert Square, Dundee, in 1876. Both were able engineers, and much esteemed by their contemporaries.

For the accompanying photograph, and much of the information here set forth, I am indebted to the existing firm of James Carmichael & Co., Ltd., of the Ward Foundry, Dundee, Scotland.

A Short Historical Sketch of The Cheraw and Darlington and Cheraw and Coalfield Railroads.

By Wm. Godfrey.

The Cheraw and Darlington Railroad was chartered in 1849—the year of the Gold rush to California. A survey was made that year, but no construction work was started till 1853, when the State of South Carolina voted some financial aid. The road was then built from Cheraw, South Carolina to Florence, South Carolina, at which point it connected with the North Eastern R. R., which extended from Florence to Charleston and the Wilmington and Manchester R. R., which extended from Wilmington, North Carolina to Kingville, South Carolina. All of these roads are now a part of the Atlantic Coast Line system.

The Cheraw and Darlington road, 40 miles in length, was completed in 1856—was 5 ft. gauge and laid with iron chair rail.

The rolling stock consisted of three locomotives, with 10x20 cylinders, two passenger cars, one combination car and twenty-five box cars of 12000 capacity. The box cars were not numbered, but were lettered—A, B, C etc.

During the war between the States, 1861-1865, the Confederates had the coast from Charleston and Savannah fortified—a distance of about a hundred miles—the object being to protect

the Charleston and Savannah R. R., which ran nearly parallel to the Coast between these two cities—the road being from three to twenty miles from the ocean and as that coast had innumerable inlets and rivers, these defenses all faced the ocean to prevent attacks from the federal gunboat forces which were frequently landed to try to destroy the rail road, this road being almost vital to the Confederacy as it was part of the line that Lee's army in Virginia was getting its supplies over.

When Sherman reached Savannah on Christmas day 1864—on his "March to the Sea"—having started from near Chattanooga the spring before, the Confederate commanders thought that from Savannah he would march on Charleston, but instead he struck out north west towards Columbia, the Capital of the State. After Sherman reached Columbia, the Confederates saw that it was hopeless to try to hold this line of defenses, as Sherman could turn and march in behind them, taking them in reverse—destroying the railroad first—as the Confederate line was between the railroad and the Coast. It was hastily decided to withdraw all of the forces and concentrate them at Cheraw, on which point Sherman was marching after leaving Columbia. There was only a weeks time in which this movement could be made, as Sherman would reach Cheraw in that time. All of the rolling stock of the Charleston and Savannah and the North Eastern roads were used to move this force of about 35,000 men, with the equipment, guns, ammunition, etc., to Florence, where the Cheraw and Darlington road was to move them on to Cheraw. The rolling stock of the Wilmington and Manchester, with the small amount of the Cheraw and Darlington road was used between Florence and Cheraw. There being no telegraph line between Cheraw and Florence made it difficult to handle the trains, so a plan was adopted of running the trains out of Florence twenty minutes apart till ten trains were on their way, then as quickly as unloaded at Cheraw the ten trains were run back to Florence in the same way, and ten more loaded started to Cheraw, the empties going back for further loads to Charleston.

As these trains were made up of all kinds of cars—passenger, box cars and flats—and the road being in bad condition, a speed of fifteen miles per hour was put in effect. A train could only bring some 350 men with equipment, so it took about a hundred trains each way to make the movement.

The Confederates, under General Hardee, completed the movement to Cheraw just a day ahead of Sherman's arrival with some 70,000 troops, and a great deal of the ammunition and equipment had not been unloaded when Sherman entered the town. This was the first point that an army had been in front of Sherman since he had left Atlanta the summer before. General Jos. E. Johnston succeeded Hardee at this point and ordered a retreat to Fayetteville, North Carolina, where he was to join some 15000 under General Beauregard. This was the same army that surrendered to Sherman near Greensboro, North Carolina the following April—ending the war. The official records of the war shows General Sherman's report that he captured 3600 barrels of powder besides other military supplies in cars on the Cheraw and Darlington tracks at Cheraw, that had to be left by the Confederates in their hasty retreat. Sherman burned all the trestles on the road between Cheraw and Florence, also the shops at Cheraw, which had one of the three locomotives in it, being repaired.

The Cheraw and Coalfield R. R. was chartered in 1857. It was to extend from Cheraw to Comnock coal mines in Chatham County, North Carolina, this being the only coal mine being worked at that time in the Confederacy south of Virginia. No work was done on the road till 1864, when as a war measure the construction was commenced in order to bring this coal via Cheraw to Charleston for the Confederate Navy and "blockade runners." Some of this coal was being floated down the Deep River and Cape Fear River to Wilmington, the mine being near the bank of the Deep River.

Though Lincoln had issued his proclamation of Emancipation to go in effect January 1st, 1863, of course it was disregarded in the South, and for labor to build the road, the large slave owners in the lower part of South Carolina sent all of their men to work in construction for their board. It is amusing to look over the old books of the treasurer of the road to see what prices were paid for supplies—"A pair of mules $8000"; "Corn thirty dollars a bushel"; "Lard $5 per pound"; "One paper of needles $10"; "One ream of foolscap paper $87." Of course this was paid for in Confederate currency, which had reached a low ebb. As the war ended before the grading was done, the work was abandoned, and not till 1879, when the name was changed to the Cheraw and Salisbury R. R.,

was the road completed to Wadesboro, North Carolina. It wa
laid with 45 pound steel rail—the first steel rail to come South
as far as I can find out. The rail was made at Leige, Belgium
and cost $200 a ton. It was a very tough rail. Though it re
mained in use for thirty years, there was never a "broken rail"
reported.

This road is now a part of the Atlantic Coast line system
and forms a part of its connection with the Norfolk and West
ern.